

**ABSTRACT**

The invention contemplates a system and method offering optimization and management of manufacturing resources to obtain optimal manufacturing capacities and to avoid manufacturing down-time currently realized through manual operation and control of manufacturing resources. In an illustrative implementation, the present invention contemplates an exemplary optimization computing application operating in a computing environment which communicates with, cooperates with, and provides optimization data for use in managing manufacturing resources (e.g. manufacturing machines). The computing application accepts a variety of manufacturing related information as input, processes such manufacturing data and generates optimization suggestions for use to manage manufacturing processes and to optimize manufacturing capacities. The optimization data may be applied to a particular manufacturing environment to control the operation of manufacturing resources such that optimization is realized.